

XII. *Revision of the Pselaphidæ of Japan.*

By D. SHARP.

[Read July 4th, 1883.]

Until the year 1874 nothing whatever was known about the Japanese *Pselaphidæ*, but in that year I was enabled to describe, in the Society's 'Transactions,' twenty-four species of the family discovered by Mr. Lewis; and shortly afterwards Herr Julius Weise added, in the 'Deutsche Entomologische Zeitschrift,' three others found by Mr. Hiller at Hagi. Mr. Lewis has recently returned from a second visit to the Archipelago, bringing back with him a magnificent collection of Coleoptera, which we may hope will be well worked out, for it is sufficiently extensive to enable us to form an approximately just estimate of this department of the Japanese fauna, and to compare it with those of Europe and North America. What amount of endemic peculiarity in its fauna the Archipelago will ultimately prove to possess must, however, still remain undetermined, owing to the excessively imperfect state of our knowledge of the natural history of the neighbouring regions, the entomology of the North of China and of the Korea being among the least known of any part of the world. So far as the fauna of Eastern Siberia goes, there does not appear to be so great an identity between it and that of Japan, as from their geographical propinquity we might expect.

Mr. Lewis' recent discoveries enable me to bring the list of Japanese *Pselaphidæ* to sixty-seven species, assigned to seventeen genera, nine of these latter being, so far as we at present know, peculiar to Japan. Nearly one-half of the Japanese members of the family I have assigned to the genus *Batrisus*, which is one of the most extensive and widely distributed of the components of the family. The Japanese representatives of this genus are extremely varied, and, if studied without relation to those of other countries, might form several genera;

but when I examined the variations of structure existing in the *Batrisci* of Europe, North America, and other countries, I found it would not be desirable at present to divide the Japanese forms, most of the genera recently established at the expense of *Batriscus* being of doubtful validity. The Japanese *Batrisci* exhibit, however, but little affinity with the European members of the genus, and, if we eliminate them and the members of other widely-distributed genera from the list, we find that the relationship of the Japanese *Pselaphidæ* to those of Europe is limited to the possession of a species of the genus *Centrotoma* and four of *Bythinus*, all being, however, distinct species from any found in Europe. On the other hand, the contrasts between the two faunæ are very striking. *Bythinus* forms, in Europe, thirty per cent. of the Pselaphid fauna, whereas in Japan it is reduced to six per cent. One-half of the Japanese genera are not found in Europe, and nearly three-fourths of the European genera have no species in Japan; while the group *Euplectini*, forming one-sixth part of the European fauna, has as yet no representative in Japan. The two faunæ, then, have only a slight special relationship. Special affinity between the Japanese and North American faunæ of *Pselaphidæ* is still less, and is limited to the possession by Japan of three species of the genus *Tmesiphorus*. Although the Japanese fauna in this department appears thus at present to possess a considerable amount of peculiarity or endemism (as I have heard it well termed by Mr. Bates), I am far from supposing that this will prove to be really the case, for so little do we know of the *Pselaphidæ* of the Oriental regions of the Eastern hemisphere that it is quite probable the whole of the peculiar Japanese genera may be ultimately found in these "terræ adhuc quoad Pselaphidas incognitæ," and that a considerable proportion of the actual species may be found in China and the Korea. Our views, too, may still be largely modified by the discovery of fresh forms in Japan itself, for I think it probable that there are at any rate 150 species of the family actually indigenous there, and compared with this number the 67 as yet brought to light appear comparatively unimportant.

The following is a list of the species arranged generically:—

- PORODERUS.**
Ctenistes armatus, Sharp.
 „ *medius*, Sharp.
 „ *similis*, Sharp.
- CTENISTES.**
Ctenistes mimeticus, n. s.
 „ *oculatus*, Sharp.
 „ *discedens*, n. s.
 „ *breviceps*, n. s.
- CENTROTOMA.**
Centrotoma prodiga, Sharp.
- STIPESA.**
Stipesa rudis, Sharp.
- RAPHITREUS.**
Tmesiphorus speratus, Sharp.
- TMESIPHORUS.**
Tmesiphorus crassicornis, Sharp.
 „ *princeps*, n. s.
 „ *costatus*, Weise.
- LABOMIMUS.**
Labomimus reitteri, n. s.
- LASINUS.**
Lasinus spinosus, Sharp.
- TYRUS.**
Tyrus japonicus, n. s.
- BATRISUS.**
Batrismus euplectiformis, n. s.
 „ *spiniollis*, n. s.
 „ *longicornis*, n. s.
 „ *angustus*, Sharp.
 „ *punctipennis*, n. s.
 „ *palpalis*, n. s.
 „ *acuminatus*, n. s.
 „ *vestitus*, n. s.
 „ *caviceps*, n. s.
 „ *oscillator*, n. s.
 „ *politus*, n. s.
 „ *concolor*, n. s.
 „ *fissifrons*, n. s.
 „ *ornatus*, Sharp.
 „ *basicornis*, n. s.
- Batrismus rugicollis*, n. s.
 „ *ornatifrons*, n. s.
 „ *stipes*, Sharp.
 „ *solitarius*, n. s.
 „ *gracilis*, n. s.
 „ *dissimilis*, Sharp.
 „ *puncticollis*, n. s.
 „ *fragilis*, n. s.
 „ *japonicus*, n. s.
 „ *fallax*, n. s.
 „ *similis*, n. s.
 „ *pedator*, n. s.
 „ *modestus*, Sharp.
 „ *antennatus*, Weise.
 „ *optatus*, Sharp.
- MORANA.**
Morana discedens, Sharp.
- ACETALIUS.**
Acetalius dubius, n. s.
- BRYAXIS.**
Bryaxis princeps, Sharp.
 „ *alienus*, Sharp.
 „ *cubitus*, Sharp.
 „ *mundus*, Sharp.
 „ *affinis*, n. s.
 „ *pullus*, Sharp.
 „ *curtus*, Sharp.
 „ *crassipes*, Sharp.
 „ *latifrons*, n. s.
- TRIOMICRUS.**
Triomicrus simplex, n. s.
 „ *protervus*, Sharp.
- BYTHINUS.**
Bythinus affinis, n. s.
 „ *japonicus*, Sharp.
 „ *subseriatus*, Weise.
 „ *reversus*, n. s.
- PSELAPHUS.**
Pselaphus debilis, n. s.
 „ *lewisii*, n. s.
- DIARTIGER.**
Diartiger fossulatus, n. s.
 „ *spiniger*, n. s.

PORODERUS, n. g.

Closely allied to *Ctenistes*, but the 2nd joint of the maxillary palpus is destitute of articulated appendage. Differs from *Enoptostomus* by the great elongation transversely of the terminal joints of the palpi, by the elongation of the perpendicular front of the head, by the elongate hind trochanters, as well as by the form and stature, which are those of *Ctenistes*.

The genus will include, so far as at present known, only the Japanese species, *P. armatus*, *P. medius*, and *P. similis*.

Ctenistes armatus.

Ctenistes armatus, Sharp, Trans. Ent. Soc. Lond., 1874, p. 111.

Mr. Lewis has found, at Yokohama, a few specimens, male and female, of a *Poroderus*, the male of which agrees pretty well with the typical male specimen of *P. armatus*, except that the antennæ are slightly shorter, the 7th joint especially being less elongate, and the terminal joints of the maxillary palpi scarcely so elongate externally; they can scarcely be more than a variety. In the female joints 4—6 are not quite so short as they are in the male, and the 7th joint also is slightly longer; but the 8th joint is quite small, and the terminal three joints are each a little shorter than in the male, the 9th and 10th both being each only about as long as broad. These individuals indicate that the female indicated by me as being perhaps that of *C. armatus* (Trans. Ent. Soc. Lond., 1874, p. 111) is more probably that of a closely-allied distinct species; Mr. Lewis has indeed found at Hakone a second example of it, but at present it had better not be described, a knowledge of the male being indispensable.

Ctenistes medius.

Ctenistes medius, Sharp, *l. c.*

Neither this nor the following have been yet found again, so that both are still unique.

Ctenistes similis.

Ctenistes similis, Sharp, *op. cit.*, p. 112.

CTENISTES.

This genus and its allies offer, even at present, great practical difficulties in their limitation, each of them showing much variety in structure of the forms included in them. The Japanese species, even after the separation of those assigned to *Poroderus*, are heterogeneous, *C. mimeticus* being apparently a typical *Ctenistes*, while *C. oculatus* is very isolated; and *C. discedens* approaches in some respects to the North American forms of the genus; *C. breviceps* again belonging apparently to the subgenus *Sognorus* of Reitter. The species seem to be of great rarity, with the exception perhaps of *C. breviceps*.

Ctenistes mimeticus, n. s.

♀. Rufus, nitidus, sat crebre setulosus; antennis minus elongatis, apicem versus incrassatis, articulo septimo quam contiguus paulo longiore, undecimo præcedentibus duobus simul sumtis paulo longiore. Long. $2\frac{1}{4}$ mm. N.B. feminae *C. armati* fere omnino similis, notis generis fere tantum differt.

Ctenistes medius, ♀?, Sharp, Trans. Ent. Soc. Lond., 1874, p. 112.

This insect resembles excessively the female of *C. armatus*, but differs therefrom by the 2nd joint of the maxillary palpi being armed with a seta, and by the posterior trochanters being shorter and not clavate.

A specimen was found in the Nagasaki district, April 12th, 1881; and the insect I queried as being possibly the female of *C. medius* is also an individual of this species. The two specimens agree entirely in all characters of importance, and are, I presume from the structure of their antennæ, females.

Ctenistes oculatus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 110.

This remarkable insect is still unique, and is very distinct from any other *Ctenistes* known to me; the tenuity of its tibiæ is very remarkable.

Ctenistes discedens, n. s.

♂. Testaceus, crebrinus pallido-setulosus, antennis elongatis, articulis 9o et 10o præcedentibus parum longioribus, articulo terminali sat elongato; capite brevi, oculis magnis; prothorace brevi, setuloso sed haud sculpturato, elytris hoc duplo longioribus; pedibus elongatis tenuibus. Long. 2 mm.

This is another very aberrant *Ctenistes* quite dissimilar from any other known to me, and cannot be associated with the species of either of the two subgenera proposed by Reitter, nor with any North American species known to me. The antennæ are nearly $1\frac{1}{4}$ mm., the 3rd joint rather longer than the 2nd, it and joints 4—8 scarcely differing from one another, each longer than broad; 9th and 10th subequal, each longer (but not greatly so) than the 8th; 11th joint about equal in length to them together. Head short and broad, with very large eyes. Thorax slightly transverse. Three first dorsal segments about equal to one another. Hind trochanters moderately long, stout, not clavate.

The individual described is no doubt a male; it has the anterior trochanters and the base of the femora armed beneath with erect setæ, the metasternum deeply and broadly impressed along the middle, and the ventral segments somewhat depressed on the middle for the greater part of the length of the hind body.

Hitoyoshi, 8th May, 1881.

A specimen found at Kioto on the 10th June, 1881, is probably the female of this species; it has the same setulosity on the front legs, and the trochanters correspond, except that those of the middle and hind legs are rather shorter; the antennæ are different, being much shorter; joints 3—10 slender, each longer than broad; 10th about equal in length to the 3rd, but a little stouter; terminal joint rather stouter, as long as the three preceding together; metasternum less impressed; ventral segments not impressed.

Ctenistes breviceps, n. s.

Flavo-castaneus, elytris rufescentibus, crebrius, subtiliter flavo-setulosus, palpis testaceis articulis ultimis extus parum prolongatis; capite brevi, lato; prothorace

transverso, basi vix discrete foveolato, elytris hoc vix duplo longioribus. Long. $1\frac{1}{2}$ mm. Mas, antennis articulis 3—7 brevioribus, 8—11 elongatis inter se subæqualibus.

This species may be placed in the subgenus *Sognorus*, Reitter. Compared with *Ctenistes Oberthuri*, it is slightly larger, with the elytra longer and not so narrow in front; the antennæ of the female are formed much as in that sex of *C. Oberthuri*, joints 3—9 differing but little from another, while the 10th is rather larger, slightly transverse; terminal joint large and stout, as long as the three preceding together. In the male joints 4—7 are short and similar to one another; 8—10 elongate, subequal, each twice as long as broad; terminal joint rather longer than the preceding. Head quite broad and short, the two foveæ of the vertex large. Thorax evidently transverse. Elytra densely setulose at their hind margin. Posterior trochanters quite short. The sexual characters, except as regards the antennæ, are slight.

Tokio, 25th March, 1880; Yokohama; Niigata, 13th September, 1881; in all seven specimens, of which two only are males.

CENTROTOMA.

Centrotoma prodiga, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 107.

Mr. Lewis has found a second individual of this species, with the claviger ant, on the Shiwojiri-toge, 30th July, 1881. The species is truly a *Centrotoma*, distinguished from *C. lucifuga* by the more distant and coarser setulosity, and by the less transverse, more bead-like, joints of the antennæ.

STIPESA.

Stipesa rudis, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 109.

This anomalous insect is still unique, and on looking at it again, as I am enabled to do by the kindness of Mr. Lewis, I can find nothing in my description to alter or supplement. It appears to be, as conjectured by Herr Reitter, an anomalous member of the *Ctenistini*, having probably, though not certainly, unequal claws

to the tarsi; the squamosity of the surface is such as is considered diagnostic of the *Ctenistini* by Herr Reitter.

RAPHITREUS, n. g.

This genus is established for *Tmesiphorus speratus*, Sharp. When describing that insect I alluded to certain characters which distinguished it from its North American congeners, but did not think it necessary to give it a separate generic name; the progress of analysis since then renders this now inevitable. The important fact that each of the three terminal joints of the maxillary palpus is provided externally with a setiform appendage differentiates the insect from *Tmesiphorus*; in this respect it somewhat resembles *Desimia*, Reitter (*Tetracis*, Sharp), but this is the only point of considerable approximation between the two, and the structure of the head, thorax, and hind body are quite different. The other two Japanese *Tmesiphori* will pretty certainly constitute also a genus distinct from *Tmesiphorus*, as they have the mesosternum entirely ecarinate; but as this character has not been examined hitherto in the allies, they may at present remain in the genus. *Raphitreus* has the three terminal joints of the maxillary palpi rather stout and acuminate (but not prolonged) externally, and each armed with a conspicuous articulated seta; the head, thorax, and elytra are formed as in *Tmesiphorus*, and the basal dorsal plates of the hind body are carinate; the mesosternum also is strongly carinate along the middle. Whether *T. costatus*, Weise, be a *Raphitreus* or not, I cannot say; the species has not been found by Mr. Lewis, and is unknown to me.

Tmesiphorus speratus.

Tmesiphorus speratus, Sharp, Trans. Ent. Soc. Lond., 1874, p. 109.

Mr. Lewis has now found three other males of this species on Maiyasan, Kobè, 14th July, 1881; Kashiwagi, 23rd June, 1881; and at Oyama, 25th May, 1880. The female is still unknown.

TMESIPHORUS.

Tmesiphorus crassicornis, n. s.

Major, sat elongatus, fere nudus, parum nitidus rufus, antennis crassis, articulis 2—8 transversis, clava magna; prothorace densissime punctato, elytris abdomineque parce obsolete punctatis, illis ad humeros late profundeque impressis; mesosterno ecarinato. Long. 3 mm.

The peculiar sculpture and the excessively abbreviated clothing (the latter appearing indeed, without careful examination, to be entirely absent) render this fine species very readily identified; it has moreover the eyes less coarsely faceted than the other *Tmesiphori*; the sculpture of the thorax is excessively dense, so that the surface appears rugose and its punctuation less distinct than usual; the basal joint of the antennæ is elongate, about as long as the three following together.

In the male the antennæ are stouter than they are in the female, and the club is excessively thick; the 10th joint has its outer part sliced off, and this is also the case with the basal part of the following joint, and the 2nd and 3rd ventral segments are slightly depressed on the middle.

Mr. Lewis has found three specimens; one male with a black ant at Suwa Temple, Nagasaki, July 31st, 1871; a second male, also with a black ant, at Shiba, in Tokio, May 21st, 1880; and a female at Nanayo, S. Yezo.

Tmesiphorus princeps, n. s.

Major, elongatus, fusco-rufus, elytris rufis, crebrius breviter pubescens, parum nitidus, antennis elongatis, clava (feminæ) præsertim elongata, prothorace densissime sculpturato, opaco; elytris abdomineque obsolete punctatis, illis ad humeros depressis; mesosterno ecarinato. Long. $3\frac{1}{4}$ mm.

Judging from a single female, this is allied to *T. crassicornis*, but is abundantly distinct; the setiform appendages on the 2nd and 3rd joints of the palpi are remarkably clongate, and the subocular patches of pubescence are greatly developed; and the abdominal carinæ only reach the base of the 2nd segment instead

of extending for the greater part of its length, as they do in *T. crassicornis*.

Found in company with a black ant at Futai, Sept. 20th, 1881.

Tmesiphorus costatus, Weise.

Weise, Deutsche Ent. Zeit., 1877, p. 99.

Oshiroyama, near Hagi; found by Hiller.

I have not seen the species, which has not been met with by Mr. Lewis.

LABOMIMUS, n. g.

The characters of this new genus are similar to those of *Lasinus*, with two important exceptions, *viz.*, that joints 2—4 of the maxillary palpi are angulate externally, and that the basal dorsal plate of the hind body is remarkably elongate, fully as long as the elytra. The basal joint of the antennæ is elongate, and the head is furnished with a very elongate prominence, the antennæ being inserted on the under surface of the anterior part of this prolongation. The trochanters are very elongate. The genus is thus a very distinct one to be located near *Lasinus* and *Tmesiphorus*.

Labomimus reitteri, n. s.

Elongatus, convexus, piceo-rufus, nitidulus, evidenter pubescens, prothorace obsolete trifoveolato; elytris stria suturali impressa, aliaque discoidali abbreviata, his striis ad basin foveolatis, abdomine segmento primo dorsali valde elongata, basi utrinque plicula elavata sat elongata. Long. $3\frac{1}{2}$ mm.

Antennæ stout, dark red, very elongate; basal joint about as long as the four following together, the three terminal joints forming a long slender club. Head coarsely and closely granulose-punctate, opaque; genæ angularly prominent beneath. Thorax narrow, longer than broad, very convex, the convex disc without sculpture, the rest granulose-punctate, an obscure fovea on each side (not near the base), and a more distinct one in the middle near the base. Elytra rather longer than the thorax, much narrowed at the shoulders, very sparingly

punctate. Hind body nearly black, sparingly pubescent. Legs elongate.

The unique example is, I presume, a male; the anterior trochanters have a short slender spine beneath, the femora a very long one; the middle trochanters have at the extremity a slender spine, and before this one or two acute asperities; the corresponding femora are angulate in the middle, and armed with a minute spine.

Hakonê, May, 1880.

I have much pleasure in naming this fine Pselaphid in honour of Herr Edmond Reitter, of Vienna, whose recently published 'Attempt at a Systematic Arrangement' of the family supplies a valuable clue for the determination of the numerous genera of the family.

LASINUS.

Lasinus spinosus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 106.

Mr. Lewis found this species on several occasions about Nagasaki, in the months of March and April, 1881, and also at Kuroheiji, Miyanoshta, Kiga, Kioto, Kobè, Osaka, and Oyama, in Sagami; at Osaka it was found as late in the season as the 8th July.

It shows considerable variation in certain points, and, as the characters distinctive of the sexes are of a very peculiar and even contradictory character, it is desirable to briefly notice them. The male has a polished space on the inner face of the 10th joint of the antenna, near its apex; this space is variable in size, and where it is most developed the spot is also excavate, and the upper margin of the excavation is prolonged; occasionally this joint is simple: the anterior trochanter bears an acute spine, and the femur a still longer one; the middle trochanter is very strongly angulate beneath, and the femur has a very minute acute denticle. The armature of the female legs differs in that the spines are usually rather longer, and that the middle trochanter bears two spines, of which the outer one is rather elongate; thus the legs in this sex are more spinose than in the male. In each of the sexes the antennæ vary much in the elongation of their joints.

TYRUS.

Tyrus japonicus, n. s.

Rufus, abdomine fusco-rufo, evidenter pubescens, prothorace impunctato, basi linea curvata impressa parum distincta; elytris humeris sat prominulis, intra humeros depressis, ad basin minute quadrioveolatis, stria suturali, aliaque discoidali abbreviata; abdomine segmento primo dorsali in medio ad basin plicula elevata parum conspicua. Long. 2 mm.

Mas, antennarum clava elongata, articulis 9 et 10 latitudine longioribus, femoribus anterioribus parum perspicue bituberculatis, trochanteribus intermediis longius bispinosis, abdomine longitudinaliter in medio depresso.

This species, allied to the European *Pselaphus mucronatus*, Panz., is nevertheless abundantly distinct therefrom by the rufescent colour, by the pubescent surface, less elongate thorax, and by the male characters; it has, too, the maxillary palpi larger, though similarly formed, and their articulated apical seta remarkably conspicuous.

Nagasaki, March, 1881; Hitoyoshi, May 16th; Kobè, June 6th; Wada togè, Aug. 1st. In each case a single specimen only was found.

BATRISUS.

The fine series of species of this genus, discovered by Mr. Lewis, shows that these forms constitute the most important portion of the Pselaphid fauna of Japan. They exhibit much variety in their structural characters, while the secondary sexual characters of the males show a multiplicity of various extraordinary and inexplicable structures of different kinds, and situate in diverse parts of the body, forming a series that is, I think, without equal in any other genus of Coleoptera. Although species of the genus *Batrisus* are in the European fauna but few, yet in many other parts of the world they form a large and important part of the *Pselaphidæ*, and a division or arrangement of the species is necessary, if only to facilitate their determination. Several genera and subgenera have been erected for the species, based chiefly on the European and North American forms, but they cannot be looked on at present as satisfactory, and a monographic revision of the whole of the genus will

be necessary before satisfactory results can be hoped for. The Japanese species do not fall satisfactorily into any of the genera or subgenera already established, and as it would be clearly, under the circumstances, unadvisable to create more new names, I have grouped the species in a preliminary manner so as to facilitate their study. Unfortunately the individuals of the species at my disposal are very few, the *Batrissi* in Japan, as elsewhere, apparently occurring to the collector only occasionally, and even then only in ones and twos.

- I. 1st dorsal segment of hind body but little longer than the 2nd; 1st, 2nd, and even 3rd segments with very slightly raised, but true, lateral margins; no spur at extremity of hind tibia; terminal joint of maxillary palpi short. *B. euplectiformis* only.

Batrissus euplectiformis, n. s.

Minus convexus, evidenter pubescens, rufescens, elytris sanguineis; antennis crassiusculis articulis tribus ultimis conspicue latoribus; vertice profunde lateque curvatim impresso; prothorace ante basin in medio canaliculato, versus basin fortiter angustato, lateribus in medio angulatis; elytris subtiliter punctulatis, stria suturali subtili, pliculaque discoidali valde abbreviata, humeris minute angulatis; abdomine segmento duobus basalibus subæqualibus, segmentis 1—3 ad latera submarginatis. Long. 2 mm.

Mas, trochanteribus posterioribus subspinosus, segmentis ventralibus in medio depressis. Fem. incog.

This interesting species can be confounded with no other, by reason of the abdominal structure and the *Euplectus*- or *Trichonyx*-like form; it has no trace of a spur on the hind tibiæ.

A single individual only has been found on the bluff at Yokohama, May, 1880.

- II. 1st dorsal segment only about twice as long as the 2nd; side-piece of 1st segment very narrow, so as to form nearly or quite a lateral margin; such may also be distinguished, though very obscure, on the 2nd segment. Hind tibia without apical spur (or with only the rudiment thereof). Maxillary palpi rather elongate. *B. spinicollis*, *B. longicornis*, and *B. angustus*.

The species of this group prove clearly that De Sauley is correct in considering that the side-piece marked off by the curved plica of the 1st dorsal plate is really the homologue of the lateral margin; in *B. spinicollis* and *B. longicornis* this line is very close to the outside, and thus marks off a lateral margin, which is slightly raised; in *B. angustus* the line is further from the side, and makes the transition to the more ordinary species of the genus, in which a side-margin appears to be entirely wanting.

Batrisus spinicollis, n. s.

Rufescens, elytris sanguineis, longius pubescens, minus subtiliter punctatus; antennis elongatis, articulo singulo latitudine longiore; prothorace ad basin fortiter angustato, inæquali, disco profunde canaliculato, angulis elevatis quatuor armatis, lateribus impressis, medio lateris angulo prominulo; elytris minus elongatis, minus subtiliter punctatis, humeris parum angustatis, angulo prominulo minuto, striola discoidali brevi, obscura, basi quadrifoveolato; abdomine minus subtiliter punctulato, segmento secundo dorsali minus brevi, segmento basali parum elongato, secundo haud duplo longiore, plicula laterali a margine parum remota. Long. $2\frac{5}{8}$ mm.

The unique individual of this very distinct species is apparently a female; the forehead is depressed in the middle, the clypeus simple, the vertex carinate in the middle, but not at the sides, and the legs are quite unarmed.

Hitoyoshi, 7th May, 1881.

Batrisus longicornis, n. s.

Angustus, convexus, rufus, longius pubescens, antennis pedibusque elongatis, gracilibus; prothorace ad basin fortiter angustato, inæquali, opaco, disco profunde canaliculato, utrinque carinula elongata posterius angulatim elevata, ad latera impresso; elytris parce haud fortiter punctatis, stria suturali subtili, discoidali fere nulla; abdomine minus subtiliter punctulato, segmento secundo dorsali minus brevi, segmento basali parum elongato, secundo vix duplo longiore, plicula laterali ad marginem approximata. Long. 2 mm.

Mas, metasterno basi in medio angulariter biprominulo, trochanteribus posterioribus spinosis, abdomine segmento ultimo ventrali impresso.

Another very distinct species, allied, however, in many respects to *B. spinicollis*; the hind tibiæ are armed with a very short spur.

Two males of this species were found at Miyanoshita; and a female at Ichiuchi, on the Kumagawa, 1st May, 1881.

Batrisus angustus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 113.

A second specimen of this species was found at Kiga; and another, with the front of the head rather differently formed, at Nagasaki, on the 18th April, 1881. I am by no means sure whether this latter individual is the male of *B. angustus* or another species altogether.

III. 1st dorsal segment twice or three times as long as 2nd, its side-piece quite broad, though very distinct. Hind tibiæ with long apical spur; maxillary palpi with more or less elongate terminal joint. *B. punctipennis*, *B. palpalis*, *B. acuminatus*, and *B. vestitus*.

The four species here associated are very distinct, *B. palpalis* having a peculiarly slender elongate terminal joint to the maxillary palpi, *B. acuminatus* an unusually conical hind body, and *B. vestitus* a largely-developed basal joint to the antenna, an enlarged cavity for its insertion (in the male at any rate), and a tibial spur less elongate than in the other species; it approaches in most respects to the species of Group VI., and its affinities will require more consideration.

Batrisus punctipennis, n. s.

Gracilis, rufus, parce sed evidenter pubescens, antennis fere gracilibus; palpis articulo ultimo elongato, gracili, capite lateribus pone oculos conspicue setigeris, vertice utrinque longitudinaliter carinato; prothorace elongato, elytris hoc longioribus, intra humeros impressis, fortiter punctatis; abdomine segmento primo dorsali sequentibus duobus paulo longiore, ad latera utrinque linea curvata a margine remota; tibiis posterioribus apice calcari elongato. Long. 2 mm.

This species, of which I have seen but two individuals of doubtful sex, much resembles *B. angustus*, but the hind tibiæ are armed with an elongate apical spur, and the curved line on the 1st dorsal plate is widely distant from the outside; the front of the head, too, in *B. punctipennis* is simple, but this may be only due to a difference of sex. The elongation of the terminal joint of the maxillary palpi approximates the species to *B. palpalis*, next which, notwithstanding the great difference in size, I have placed it.

The two individuals found have a very slight mucronation of the apex of the middle tibiæ.

Miyano-shita and Hakone.

Batrissus palpalis, n. s.

Major, densius pubescens, rufus, abdomine piceo, antennis sat crassis, elongatis, palpis articulo ultimo elongato, gracili; capite minus brevi, posteriori angustato, oculis in medio laterum sitis, post oculos longius setigero; prothorace elongato, medio canaliculato, utrinque versus basin angulo elevato, ad latera longitudinaliter impresso; elytris striola (fere plicula) discoidali abbreviata, evidenter punctatis; abdomine segmento basali parum elongato. Long. $3\frac{1}{2}$ mm.

Mas, antennarum articulo ultimo elongato, oblique acuminato, intus ad basin processu prominulo; femoribus intermediis ad basin margine posteriore spina tenui armato. Fem. incog.

This fine and distinct species, by the shape of its head, reminds one of *Amaurops*, from which, however, it is very different by its robust make, and the comparatively short 1st dorsal segment. The large vertex of the head is shining, and separated by an elongate angular mark from the elevated antennal portion; this latter is in front much elevated and punctate, and bears behind an elongate carina; the forehead grades off to the clypeus without any interruption; the curved plica on each side of the basal dorsal plate is very far removed from the side; this plate is only a little longer than the 2nd and 3rd together, the 4th is more elongate than the 3rd, distinctly but not greatly shorter than the 1st; the apical spur of the hind tibiæ is very elongate.

A single specimen was found at Mayebashi, Aug. 28th, 1881.

Batrisus acuminatus, n. s.

Rufus, evidenter sed minus dense pubescens, antennis sat crassis, haud elongatis, palpis articulo ultimo sat elongato; capite minus brevi, posteriorius angustato, oculis in medio laterum sitis, post oculos longius setigero; prothorace sat elongato, medio canaliculato, utrinque breviter carinulata, carinula posteriorius angulatim elevata, ad latera longitudinaliter impressa; elytris fortiter punctatis, striola (fere plicula) discoidali abbreviata; abdomine conico, acuminato, segmento basali parum elongato, sequentibus duobus vix æquali. Long. $2\frac{1}{2}$ mm. Mas, incog.

The unique female appears to indicate a species closely allied to *B. palpalis*, and as of that species only the male, and of *B. acuminatus* only the female, is known, it is probable that the differences are in part sexual; *B. acuminatus* is, however, much smaller, has a scantier pubescence, more strongly punctured elytra, and a peculiarly conical hind body. The apical spur of the hind tibiæ is very elongate, as in *B. palpalis*, and the curved plica of the basal dorsal plate is very widely removed from the side. The antennæ are not so long as head and thorax; joints 4 and 5 are each about as long as broad, 6—8 very slightly shorter, 9th and 10th rather broader, the latter evidently transverse; terminal joint stout, obliquely acuminate, not so long as the three preceding together.

Nagasaki, 28th February, 1881.

Batrisus vestitus, n. s.

Major, robustus, rufescens, densius pubescens, palpis articulo ultimo sat elongato; prothorace medio tenuiter canaliculato, lateribus longitudinaliter impressis; elytris humeris haud denticulatis, striola discoidali abbreviata, basi tantum quadrifoveolato; abdomine segmento basali sequentibus duobus æquali; tibiis posticis calcari apicali minus elongato. Long. 3 mm.

Mas, antennis articulo basali crasso, facie anteriore subproducto, capite supra antennis crasse elevato, inter eas antè depresso, clypeo verticali, carina elongata, transversa, sinuata munito, in medio altiore; tibiis anterioribus intus in medio denticulatis, abdomine seg-

mento ultimo ventrali fovea magna et profunda depressa.
Fem. incog.

The antennæ are stout ; joints 2—8 but little different from one another, being each about as long as broad ; 9th joint very slightly, 10th a little more distinctly, broader ; terminal joint scarcely broader, as long as the two preceding together, acuminate.

This species appears in the male sex to be very distinct ; two specimens have been found. Hakone, amongst rotten wood ; Chiuzenji, 24th Aug., 1881.

IV. 1st dorsal segment about twice as long as the 2nd ; side-piece broad or moderately broad. Hind tibiæ without apical spur. Front of head in male remarkable. *B. caviceps* and *B. oscillator*.

In *B. oscillator* the line marking off the side-piece of the 1st dorsal segment does not extend to the hind margin.

Batrissus caviceps, n. s.

Major, gracilis, densius pubescens, rufus, antennis sat crassis, elongatis, palpis articulo ultimo sat elongato ; capite minus brevi, posterius angustato, sed truncato, angulis posterioribus minute prominulis, dense pubescentibus, antennis a labro fissura profunda divisus ; prothorace elongato, medio canaliculato, utrinque versus basin angulo elevato minuto, ad latera impresso ; elytris crebrius evidenter punctatis, absque striola discoidali ; abdomine elongato, segmento dorsali primo parum elongato, sequentibus duobus vix æquali. Long. 3 mm.

This is another very peculiar species, of which only a single specimen has been found ; it is very remarkable by the structure of the head, which is thickened in the vertical direction, and so formed that the upper portion, on which the antennæ are inserted, is separated by a deep fissure from the labrum ; the fissure can only be seen by looking at the head from the front ; the antennæ have the basal joint rather long and stout, joints 2—9 each longer than broad, 10th about as long as broad, terminal joint stouter, acuminate, as long as the two preceding. The sides of the head are densely pubescent, and the under surface likewise. The lateral plica of the

abdominal basal segment is at the base only moderately distant from the side.

The sex of the unique individual is uncertain.

Yuyama, May 12th, 1881.

Batrisus oscillator, n. s.

Robustus, densius pubescens, subtiliter punctatus, subopacus, rufescens; prothorace medio tenuiter canaliculato, lateribus longitudinaliter impressis; elytris crebrius subtiliter punctulatis, humeris haud denticulatis, intra humeros depressis sed vix plicatis, basi fere absque foveolis; abdomine segmento basali sequentibus duobus æquali; tibiis posticis calcari apicali perbrevis. Long. $2\frac{1}{4}$ mm.

Mas, antennis articulo basali inflato, faciei anterioris angulo externo producto, capite supra antennis valde prominulo, inter eas profunde depresso, sub antennis longius penicillato; clypeo verticali, carina elongata, transversa, in medio processu libero parvo armata; abdomine segmento ultimo ventrali late impresso. Fem. incog.

This species is remarkable from the finer and close punctuation of the surface; the head is without any coarse punctuation, even on the greatly elevated antennal protuberances; it is allied by the structure of the head and antennæ to *B. vestitus*, from which it is readily distinguished by the very stout apical spur of the hind tibiæ.

Two specimens found with a *Formica* under a stone on the Mikuni togé, 22nd Sept., 1881.

V. *Surface of body glabrous. B. politus and B. concolor.*

The above character distinguishes the two species from all the others at a glance; they have also a peculiar formation of the head, the vertex being truncate behind, and separated from the neck by an abrupt, very short constriction or incision; there is no spur to the hind tibiæ. In other respects the two species are not closely allied.

Batrisus politus, n. s.

Rufo-sanguineus, lævigatus, nitidus, antennis crassioribus; prothorace impressione hastata discoidali; abdomine elongato, basi foveolis magnis, profundis. Long. $2\frac{3}{4}$ mm.

Mas, pedibus intermediis femoribus in medio breviter spinosis, tibiis intus ad apicem late emarginatis.

This species, which is in many structural features allied to the European *B. formicarius*, is readily distinguished by the polished shining and impunctate surface; the hind tibiæ are without apical spurs; the 2nd and following joints of the antennæ are remarkably thick, each being much broader than long, the 9th and 10th still rather broader, the terminal joint very thick, pointed on one side. Head without any distinct impressions; the antennæ very widely separated. Thorax with a broad discoidal depression, which terminates behind by meeting an angulate transverse impression. Hind body with the 1st ventral segment with a very deep transverse impression behind the suture, and a rather longer and still deeper one on each side of it; this segment is about equal in length to the two following together; 4th segment nearly twice as long as the 3rd.

Three specimens were found with an ant at Chiuzenji, Aug. 22nd, 1881; and single specimens were also found at Hakone, Miyanosita (in May, 1880), and Nishimura, 15th June, 1881, in old wood or dead trees.

Batrisus concolor, n. s.

Rufus, lævigatus, sat nitidus, antennis crassiusculis, articulis 2—6 subquadratis; prothorace fere mutico, tantum obsolete canaliculato, ante basin foveolato; elytris absque stria discoidali, et ad humeros vix depressis; abdomine basi haud foveolato. Long. $2\frac{1}{2}$ mm.

Allied, in respect of the form of the head and the very widely separated antennæ, to *B. politus*, but very distinct by the abdominal structure. Joints 9 and 10 of the antennæ are broader than the preceding, strongly transverse; terminal joint also very stout, acuminate. Head almost without impressions. Elytra remarkably even, with a sutural stria, which is minutely deepened at the base, but can scarcely be said to be foveolate, without

trace of any other stria or basal foveæ. Hind body with 1st segment scarcely equal in length to the two following together; the 4th but little longer than the 3rd; segments 2—4 obscurely punctulate; the basal one smooth, like the anterior parts. Hind tibiæ without apical spur.

A single specimen was found at Yokohama with a black ant, April 2nd, 1880. It is probably a female.

VI. 1st dorsal segment twice or nearly three times as long as the 2nd; its side-piece only moderately broad, or quite narrow; hind tibiæ with elongate apical spur. Male characters on front of head very remarkable, and frequently with great development of the basal joint of the antennæ. *B. fissifrons*, *B. ornatus*, *B. basicornis*, *B. rugicollis*, *B. ornatifrons*, and *B. stipes*.

I have already stated that *B. vestitus*, placed in Group III., approaches the species of this group in many respects.

Batrissus fissifrons, n. s.

Nigricans, elytris sanguineis, antennis pedibusque rufis, longius pubescens; antennis sat validis ad apicem longius pubescentibus; prothorace impunctato, medio canaliculato, utrinque breviter carinulato ad latus impresso; elytris fere impunctatis; tibiis posticis calcari apicali elongato. Long. $2\frac{1}{2}$ mm.

Mas, antennis articulo basali elongato, crasso, angulo interno parum producto, clypeo anterieus in medio processu triangulari latiore, tuberculis supra antennis, latis, planis, productis, rude granulosis, capite inter eas profunde depresso et anterieus processu minuto parum conspicuo minuto; trochanteribus intermediis apice libero, curvato; metasterno late impresso; abdomine segmento basali ventrali in medio plicato-elevato, plicula ad apicem pubescente, segmento apicali medio lævigato, versus apicem bituberculato.

A single male of this species was found in Higo in 1882 by a native collector; it is closely allied to *B. ornatus*, but is rather larger and broader and blacker in colour; the basal joint of the antennæ of the male is rather broader, but its produced angle is less prominent, the flat antennal tubercles are broader and more coarsely

sculptured, and the elevation on the front of the head is much broader; the elevation on the basal ventral segment is conspicuous, and the tubercles on the apical segment, instead of being near the base, are near the extremity.

Batrisus ornatus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 114.

A few additional specimens of this species were found about Nagasaki in March and April, 1881, and single specimens, which are probably females of the species, occurred also at Nikko and Yanoshiku in the autumn of the year, as well as one at Bukejji, near Yokohama.

Batrisus basicornis, n. s.

Angustulus, rufescens, evidenter pubescens, antennis sat validis; vertice impunctato, subtiliter carinato, tuberculis antennalibus latis, dense punctatis, fronte medio depressiusculo; prothorace medio canaliculato, utrinque breviter carinulata, carinula posterius tenuiter spinosa, ad latera impressa, fere impunctata; elytris plicula discoidali abbreviata, basi minute sex-foveolatis; abdomine segmento dorsali basali sequentibus duobus æquali; tibiis posticis calcari apicali longo. Long. $2\frac{1}{4}$ mm.

Mas, antennarum articulo basali valde dilato-laminato, facie anteriore producto, densius glanduloso-granulato, tuberculis antennalibus latis prominulis; clypeo processu transverso superne in elevationem tenuem prolongato; trochanteribus intermediis angulato-prominulis; segmento ventrali apicali in medio tuberculis elongatis, prominulis.

The male of this species is readily distinguished by the great development of the basal joint of the antennæ and the different form of the ornament on the clypeus; the female is apparently only to be distinguished from the corresponding sex of *B. ornatus* by the considerably greater breadth of the process of the head that separates the insertion of the antennæ.

Three specimens were found at Miyanoskita in April and May, 1880.

Batrisus rugicollis, n. s.

Angustulus, longius parum dense pubescens, rufescens, elytris magis sanguineis; capite thoraceque ubique densissime fortiter punctatis, opacis; elytris parcissime punctulatis, plicula discoidali abbreviata; abdomine segmento basali sequentibus duobus æquali. Long. $2\frac{1}{8}$ mm.

Mas, fronte inter antennis producto, anterieus depresso et acuminato, clypeo utrinque sub antennis prominulo, in medio processu erecto ad apicem paulo latiore; trochanteribus intermediis spinosis.

This species is readily recognised by the extremely dense and coarse sculpture of the head and thorax. Antennæ similar in the two sexes; 1st joint very stout, simple; 2nd stout, bead-like, about as long as broad; 3—9 very little different from one another, each about as long as broad; 10th slightly broader; 11th a little broader, obliquely acuminate, rather longer than the two preceding together. Head nearly flat, except for an indistinct angular mark, terminated on each side behind by a very obscure fovea. Thorax rather short, a good deal dilated at the sides, the central channel indistinct on account of the sculpture. Basal segment with the side-piece marked off by a curved plica, rather narrow.

Four specimens; Oyama, in Sagami, and Miyano-shita, May, 1880.

Batrisus ornatifrons, n. s.

Longius, parum dense pubescens; capite profunde angulariter impresso, anterieus fortiter punctato, vertice medio subtiliter carinulato; thorace minus fortiter asperato-punctato, medio canaliculato, utrinque subtiliter carinulato, lateribus longitudinaliter impressis; elytris parcissime punctulatis, plicula discoidali abbreviata; abdomine segmento basali sequentibus duobus æquali. Long. 2 mm.

Mas, fronte inter antennis producto, anterieus depresso et acuminato, clypeo utrinque sub antennis prominulo, in medio processu erecto ad apicem minute furcato; trochanteribus intermediis spinosis.

This species appears to be very closely allied to *B. rugicollis*, but has greatly diminished sculpture of the

thorax and head, and some slight differences in the peculiarities of the structure of the head in the male. Only one individual has been found ; it is entirely yellow, probably from being rather immature.

Chiuzenji, Aug. 21st, 1881.

Batrisus stipes, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 115.

This has not been found again, and knowledge of the species is limited to two female examples, whose locality has not been recorded.

VII. *1st dorsal segment rather elongate, as long as the three following together; side-piece rather narrow. Hind tibiæ with elongate apical spur. B. solitarius and B. gracilis.*

These two species, known only by unique examples, differ from the others by their more slender build and greater elongation of the basal dorsal segment. They differ from *Amaurops*, Reitter, by the possession of well-marked eyes, and by their less elongate hind body.

Batrisus solitarius, n. s.

Subgracilis, castaneus, nitidus, tenuiter sed evidententer pubescens ; antennis subgracilibus, articulo ultimo elongato, acuminato ; prothorace ante basin foveolato, medio absque canalicula, lateribus longitudinaliter impressis ; abdomine segmento primo dorsali sat elongato, medio utrinque plicula elevata, brevi. Long. $2\frac{1}{2}$ mm.

A distinct species, making some approach in appearance to the species of *Amaurops*. Antennæ with the basal joint moderately long, stout ; 2nd more slender, but stouter than the following, longer than broad ; 3—8 rather slender ; 9th scarcely broader, but longer than the 8th, rather longer than broad ; 10th not stout, subquadrate ; terminal joint much larger, elongate, and acuminate. Head narrowed behind the rather small eyes, which are situated in the middle of the sides ; all the vertex broadly impunctate and shining ; the antennal tubercles elevate and rugose ; the vertex carinate in the middle and conspicuously foveolate on each side ; the outside also carinate, the outstanding setæ of the genæ

very conspicuous. Elytra narrow in front, curved at the sides, convex, the discoidal plicula excessively short; shoulders without trace of prominent angle. 1st dorsal segment rather elongate, its curved lateral plica moderately distant from the side; 2nd segment fully one-third the length of the 1st. Hind tibiæ with rather long apical spur.

Only a single individual has been found; though the head is simple in front, it is possibly a male, as the intermediate femora are armed at a little distance from the base with a rather long spine.

Kiga, May, 1880.

Batrisus gracilis, n. s.

Gracilis, rufo-castaneus, nitidus, parcius sed longius pubescens; antennis subgracilibus, articulo ultimo elongato, acuminato, basali crasso et longo, sequentibus longitudine æquali; prothorace ante basin foveolato, dorso canaliculato, lateribus longitudinaliter impressis; abdomine segmento dorsali sat elongato, medio utrinque plicula elevata brevi. Long. $2\frac{1}{2}$ mm.

Of this insect only a single specimen is present; it is no doubt a male, and is closely allied to *B. solitarius*, but is rather more slender, and with the pubescence rather longer and more scanty. The basal joint of the antennæ is much longer, and the apical joint is armed at the base internally with a slender projection; the thorax is evidently channelled on the disc; the pliculæ on the basal dorsal segment are less distant, and the surface between them is more depressed, the apical spur of the hind tibiæ is more elongate, and the middle femora are armed near their middle with a very long spine.

Miyanoshita, May, 1880.

VIII. *Eyes large, placed at the back of the head, not in the middle of the sides, as in all the other groups; 1st dorsal segment very elongate, about six times as long as the very short second ring. No spur on hind tibiæ. B. dissimilis, B. puncticollis, B. fragilis, B. japonicus, B. fallax, B. similis, B. pedator, B. modestus, B. antennatus, B. optatus.*

The species of this group apparently form a well-marked genus, which may probably, however, be connected with *Batrisus* by species unknown to me, so that I do not give it a name. The only species I know belonging to it in addition to the Japanese forms are two from Siam. The male characters in *B. optatus*, and even in *B. modestus*, are of a most remarkable character; and in *B. pedator* we find, on the hind femora of the male, a peculiarity of structure which, as regards its function, is probably the same as the peculiar structure of the antennæ of *B. antennatus* and the front tibiæ of *B. modestus*. Like the other *Batrisi*, the species are probably submyrmecophilous in their habits; two of them were found in company with *Diartiger*.

Batrisus dissimilis, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 116.

Two other individuals have been found of this species, and as, like the former specimens, they possess no peculiar sexual marks, I am inclined to think they are all females, and that the male is still unknown.

Miyanoshiba, May, 1880; Kobè, 12th July, 1881.

Batrisus puncticollis, n. s.

Brunneo-castaneus, evidenter pubescens; gracilis, antennis sat elongatis; capite thoraceque fortiter punctatis, hoc parte basali angusto haud brevi, dorso canaliculato, lateribus utrinque longitudinaliter impressis; elytris parum punctatis, stria discoidali elongata; abdominis segmento primo dorsali in medio utrinque plicula arguta sat elongata. Long. 2 mm.

Second joint of antennæ about as long as the 3rd and 4th together. Head very densely punctate, without transverse impression; vertex obscurely bifoveolate. Thorax coarsely punctured, but not so densely as the head. Elytra quite indistinctly punctate. The 1st dorsal segment very elongate, and with the two fine raised lines or plicæ more distinct and elongate than usual.

Although the male of this species has not been found, yet the female is so certainly distinct that I have no hesitation in naming it. On account of the coarsely-punctured thorax, it can only be confounded with *B. modestus* and *B. dissimilis*; it is larger than the former,

has the antennæ longer, and with longer 2nd joint, the basal portion of the thorax more elongate, and the raised lines on the 1st dorsal segment more elongate. It is smaller and more slender than *B. dissimilis*, and has the 2nd joint of the antennæ longer and stouter than the 3rd, instead of the two being subequal, as is the case in *B. dissimilis*, and the head is quite without the two large transverse depressions that are so conspicuous in the latter species.

Three specimens were found at Kashiwagi on the 18th June, 1881.

Batrissus fragilis, n. s.

Rufescens, nitidus, evidenter pubescens, antennis pedibus palpisque testaceis; capite anteriori fortiter punctato, vertice bifoveolato; prothorace impunctato, dorso canaliculato, lateribus longitudinaliter impressis; elytris ad basin quadrifoveolatis, stria discoidali elongata. Long. 2 mm.

Mas, tibiis intermediis apice interno mucronato, abdomino segmento secundo dorsali in medio paulo quam ad latera longiore, tertio ad basin linea transversa depressa; segmento ultimo ventrali sat elongato, in medio utrinque obscure carinulato, carinulis setulosis, inter eas depresso.

Antennæ slender; basal joint short; 2nd longer than the 3rd; 7th rather longer than those adjacent to it; club slender, rather strongly pubescent; the 9th joint longer than broad; 10th also slender in the female, rather broader in the male; terminal joint acuminate. Head with a slight transverse channel marking off the clypeus, which is coarsely punctate, the vertex very little punctate. Thorax rather elongate, slender. Elytra quite without angle at the shoulder; the discoidal stria deep and elongate, but not quite reaching the extremity.

Of this species Mr. Lewis found fourteen specimens, seven of each sex.

Yokohama, 7th April, 1880; Kioto, 2nd July, 1881; Niigata, 6th and 13th Sept.

Batrisus japonicus, n. s.

Rufescens, nitidus, evidenter pubescens, antennis pedibus palpisque testaceis; capite anterieus fortiter punctato, vertice bifoveolato; prothorace impunctato, dorso canaliculato, lateribus longitudinaliter impressis; elytris ad basin quadrifoveolatis, stria discoidali elongata. Long. 2 mm.

Mas, tibiis intermediis apice interno mucronato, abdomine segmento secundo dorsali margine posteriore lamina magna depressa, e setulis adpressis composita.

This species almost exactly resembles *B. fragilis*, except in the characters of the male, but these are so different as to leave no doubt of specific distinction between the two; the dense scale-like patch of the 2nd dorsal plate is very conspicuous in *B. japonicus*, and probably covers a transverse depression on the following segment, but this cannot be seen: the terminal ventral segment is not elongate, and is nearly simple.

Six males (but no female) were found of this species; an individual from Hakone (not found with the male from there) may possibly be the female of *B. japonicus*, although it presents scarcely any difference from the corresponding sex of *B. fragilis*.

Hakone and Miyanoshita; also Nagasaki.

Batrisus fallax, n. s.

Rufescens, nitidus, evidenter pubescens, antennis pedibus palpisque testaceis; capite anterieus fortiter punctato, vertice bifoveolato; prothorace impunctato, dorso canaliculato, lateribus longitudinaliter impressis; elytris ad basin quadrifoveolatis, stria discoidali elongata. Long. 2 mm.

Mas, tibiis intermediis apice interno mucronato, abdomine segmento tertio dorsali fovea transversa magna et profunda, cujus margine posteriore curvato, in medio vix elevato, segmento secundo margine posteriore in medio utrinque setulis depressis sat elongatis; segmento ultimo ventrali haud elongato, in medio utrinque carinulato, carinulis obscure setulosis, inter eas depresso.

This species again is similar in all respects, except the male characters, to *B. fragilis* and *B. japonicus*; the specimens are eight in number, and all are males,

except that at Fukushima a female as well as a male was found; this individual exhibits, however, no difference from the corresponding sex of *B. fragilis*.

Junsai, on old trees; Miyanoshita, May, 1880; Fukushima, 28th July, 1881.

Batrisus similis, n. s.

Rufescens, nitidus, evidenter pubescens, antennis pedibus palpisque testaceis; capite anterieus fortiter punctato, vertice bifeveolato, in medio subtiliter longius carinato; prothorace impunctato, dorso canaliculato, lateribus longitudinaliter impressis; elytris ad basin quadri-foveolatis, stria discoidali elongata. Long. $2\frac{1}{4}$ mm.

Mas, abdomine segmento secundo dorsali in medio brevissimo, fere nullo, segmento tertio fovea elongata, transversa, profunda, margine posteriore in medio lamina elevata, brevi; segmento ultimo ventrali simplice; trochanteribus posterioribus setulosus.

The hind margin of the basal dorsal segment in the male of this species is furnished only with short, inconspicuous pallid setæ; when an individual is examined exactly from behind, so as to look between the rings, it is seen that a large cavity exists between the 1st and 2nd rings (as well as another between the 2nd and 3rd), the 2nd ring being thrust as it were into the interior of the body beneath the 1st ring.

This is another species extremely closely allied to *B. fragilis*; I have seen only two examples, and from these I infer that, in addition to the male characters, it is distinguished from its allies by slightly larger size, by the more conspicuous depression on the front of the head, and by the evidently carinate vertex. Two males have been found.

Yokohama; Oyama, 25th May, 1880.

Batrisus pedator, n. s.

Rufo-castaneus, evidenter pubescens, antennis palpis pedibusque testaceis; capite subobsoleto punctato, vertice bifeveolato; prothorace parum elongato, globosocordato, fere impunctato, dorso canaliculato, lateribus longitudinaliter impressis; elytris convexiusculis, obsolete punctatis, stria discoidali elongata. Long. $1\frac{7}{8}$ mm.

Mas, femoribus posterioribus facie anteriori late profundeque excisa, superne vesicula membranacea parvula erecta; metasterno in medio impresso, utrinque prominulo; abdominis segmentis ventralibus brevissimis.

Antennæ slender, rather elongate, the 3-jointed club elongate and slender. Head almost even, the vertex between the foveæ slightly convex. Elytra with an indistinct minute prominent angle on the shoulder, and with a broad discoidal stria which does not quite reach the extremity.

Although extremely similar to *B. fragilis* and its allies, this species is readily distinguished by the rather smaller size of its individuals, and their more globose prothorax. The male characters are extremely peculiar, the structure of the hind femora being, in fact, unique; they present, on their upper anterior face in the middle, an elongate deep cavity; in front of the cavity the surface forms a small angular prominence, on the summit of which is placed a minute delicate vesicle.

Mr. Lewis found a small series of this species at Niigata, 15th Sept., 1881; there are but three males to nearly a dozen females.

Batrissus modestus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 116.

This species was described by me on two specimens, supposed, on account of a slight difference in the antennæ, to be male and female. Mr. Lewis has again met with the species, and discovered the male, proving the two original examples to be both females.

The following is a sketch of the remarkable male characters:—

Mas, tibiis anterioribus extus versus apicem dilatatis, in prominentia pencilla articulata armatis; pygidio excavatione magna, profunda, irregulari, ad latera excavationis glanduloso; segmentis ventralibus omnium brevissimis.

Of the species there are two varieties; in the first the front tibiæ of the male are not so much dilated, and have only a fine pencil; and the antennæ of the female are a little stouter than in the second form; in this latter the male tibiæ are considerably more dilated, and are armed with a broad pencil.

The species was met with by Mr. Lewis at Miyano-shita in May, 1880, and at Nagasaki in March and April, 1881.

It is possible the two supposed varieties may prove to be distinct species, in which case the one with broad male tibiæ should bear the name of *modestus*, a new name being applied to the form having more slender tibiæ in the male. All the Miyano-shita specimens belong apparently to the first form, but unfortunately most of the specimens met with are females. The peculiarity of the male tibiæ is not found in any other species, and is very curious; the pencil with which they are armed is apparently very mobile, and when depressed and applied to the front of the leg appears to be absent.

Batrisus antennatus, Weise (nec Motsch.).

Weise, Deutsche Ent. Zeit., 1877, p. 97.

A few specimens of this species have been found by Mr. Lewis at Nagasaki and Fukuhori in April, and at Sanjo and Niigata in Sept., 1881.

Batrisus optatus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 112.

This remarkable species is still unique.

MORANA.

This is, I think, an ally of *Batrisus*; the maxillary palpi are formed as in that genus, and the peculiarities of the head are as much like *Batrisus* as *Euplectus*; the 1st basal ventral segment is visible and prominent between the hind coxæ; the claws are very small and their condition quite doubtful,—I do not think there are two equal ones, as I formerly considered, though with some doubt, to be the case; the elongate 2nd joint and the large terminal joint of the antennæ will greatly aid the recognition of the genus.

Morana discedens, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1883, p. 118.

A second individual of this species was found at Nagasaki on the 19th April, 1881.

ACETALIUS, n. g.

Maxillary palpi quite short; terminal joint short and stout, oval in form; penultimate joint very small. Antennæ 11-jointed, short, with very large acuminate terminal joint, widely separated at their insertion. Head elongate in front of the eyes, which are placed near the hind angles, and are prominent, though rather small; antennal tubercles widely separated. Thorax elongate and narrow. Elytra subinflated. Hind body with very elongate basal segment, the others extremely short, the basal scarcely, or at least only excessively finely, margined at the sides; beneath composed apparently only of two segments, a very elongate one, and a short apical one projecting from it. Legs elongate; hind tibiæ without spurs; tarsi with a single elongate claw.

The minute insect for which this genus is established is of very doubtful affinities; the structure of its hind body is perhaps most like that of the *Pselaphini*, but the true 1st ventral segment is quite short, while those beyond the very elongate 2nd segment have disappeared; above the 1st segment is very elongate, while the following are very short and almost perpendicular. These peculiarities may perhaps be exaggerated, owing to the fact that the unique individual is immature, and the segments may therefore be collapsed to a certain extent. The head is quite different from the *Pselaphini*, and more like an elongate *Euplectus* head. The last joint of the maxillary palpus is terminated at its point by a short, straight, stout appendage. I can see no trace of a claw, but as the specimen of this minute insect is immature, and the feet have been covered with gum tragacanth, in accordance with the bad habit of our English entomologists, I may be mistaken on this point.

Acetalius dubius, n. s.

Angustulus, sordide testaceus, impunctatus, parce pubescens; prothorace elongato, ante basin transversim depresso, basi in medio longitudinaliter carinato; elytris ad humeros angustis, stria suturali, aliaque discoidali abbreviata. Long. $1\frac{1}{2}$ mm.

Antennæ with 1st and 2nd joints subequal, rather elongate in comparison with the following ones; 3rd quite small; the following ones small, very short; 6th

to 8th slightly, 9th and 10th strongly transverse; terminal joint disproportionately large, with acuminate extremity. Head depressed between the antennal tubercles, and curvedly depressed between the eyes; the vertex convex, simple. Thorax longer than broad, nearly straight at the sides, with excessively fine but distinct raised line extending from the base for nearly half the length, and so passing through the large transverse depression. The elytra are longer than the thorax, both the sutural and discoidal striæ are deep, at their origin excessively deep; the latter does not extend half the length of the wing-case.

The unique example exhibits no sexual marks.

Found among dead leaves at Suwa Temple, April 8th, 1881.

BRYAXIS.

Bryaxis princeps, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 119.

Mr. Lewis has found a series of this species near Nagasaki in March and April, showing that my opinion as to the sexes was correct; the male is constantly considerably larger than the female, and apparently much rarer.

Bryaxis alienus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 120.

Two additional male individuals were found at Nagasaki in February and March.

Bryaxis cubitus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 122.

A single male specimen was found, probably at Nagasaki, so that I am not able to throw any light on the difficult question as to the characters distinguishing the females of this and the allied species.

Bryaxis mundus, Sharp.

Sharp, *op. cit.*, p. 122.

Mr. Lewis has not brought back any other specimens that are certainly this species, but a few female individuals found about Nagasaki without any male apparently pertain to it. In notice of the male characters

I have by error stated that the hind tibiæ are mucronate, whereas it is the middle legs that are so armed.

Bryaxis diffinis, n. s.

Rufulus, sat nitidus, brevissime pubescens, vix punctulatus; prothorace trifoveolato, foveola mediali laterali-bus minore. Long. $2\frac{1}{4}$ mm.

Mas, antennis articulo decimo magno, subgloboso, femoribus anterioribus subtus ultra basin denticulo minutissimo, tibiis intermediis apice intus unco brevi armatis; abdomine segmento ultimo ventrali late impresso. Fem., antennis articulo decimo simplice, haud transverso.

This species is extremely closely allied to *B. mundus*, but the individuals are apparently slightly larger, and the head is rather more elongate, and the two fine plicæ on the 1st dorsal segment of the hind body are a little more distinct. The male has the 10th joint of the antennæ peculiarly formed, it being nearly globose, except that there is a very slight truncation of the anterior-inner edge, and its legs are stouter than in *B. mundus*. In the female the antennæ are longer than they are in the corresponding sex of *B. mundus*, the 3rd and 4th joints especially being longer, and the 10th about as long as broad.

Two pairs of this species were found at Yokohama.

Bryaxis pullus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 123.

Neither this nor the two following species have been found again. Mr. Lewis has, however, captured at Yokohama three female individuals of apparently a distinct species, allied to *B. pullus*, and it appears probable that these red *Bryaxis* are numerous in species in Japan, and excessively difficult to distinguish apart from the male characters.

Bryaxis curtus, Sharp.

Sharp, *op. cit.*, p. 124.

Bryaxis crassipes, Sharp.

Sharp, *op. cit.*, p. 125.

Bryaxis latifrons, n. s.

Parum elongatus, niger, antennis, pedibus palpisque testaceis, elytris rufo-obscuris; capite brevi, vertice bifoveolato, cumque thorace dense punctatis, hoc trifoveolato, foveola mediali parva. Long. $1\frac{5}{8}$ mm.

Mas, antennis elongatis, articulo secundo magno, globoso, tibiis intermediis ante apicem intus spina tenui, elongata, libera armata. Fem. incog.

Second joint of antennæ broader than the 1st, globose; 3rd to 7th slender; 8th stouter than the preceding; 9th slightly transverse; 10th quadrate; terminal joint rather large. Head destitute of frontal impression. Elytra finely punctulate, with sutural and discoidal striæ,—the former does not quite reach the base; at the base between the two striæ there is a small fovea, both sutural and discoidal striæ being deep at their origin; 1st dorsal segment at the base with two fine distant lines.

This species is almost entitled to generic distinction on account of the form of the head, which is less rostrate in front, and destitute of anterior depression, the antennæ being very widely separated; the terminal joint of the maxillary palpi is rather small, and the structure of the male antennæ and middle legs is very peculiar.

Two individuals found at Miyanoshita, April, 1880.

TRIOMICRUS, n. g.

Antennæ 11-jointed, widely separated at their insertion. Head trifoveolate, eyes with coarse convex facets. Maxillary palpi elongate; 2nd joint very long, nearly as long as the two following together, slightly narrowed or constricted beyond the middle; third joint with narrow base and oval extremity; terminal joint elongate and slender, between linear and oval in form, acuminate at the extremity. Trochanters short, though the intermediate and posterior femora do not touch the coxæ; hind coxæ widely separated, not prominent. Tarsi with a single elongate claw. Ventral segments in the male so abbreviated that the pygidium is scarcely separated from the metasternum. Abdominal margin small.

This genus seems allied to both *Tychus* and *Bryaxis*; it differs from the former by the structure of the head and palpi, and from *Bryaxis* by the peculiar palpi. It

has a great superficial resemblance to *Gerallus*, from which it differs by the more widely separated antennæ and the elongate single claw. To it is to be assigned *Bryaxis protervus*, which at the time of its description I indicated as a new genus; and now that Mr. Lewis has discovered a second species agreeing with it in the generic characters, it is better to separate it formally from *Bryaxis*.

Triomicrus simplex, n. s.

Rufus, nitidus, crebre pubescens; prothorace subglobo, impunctato, trifoveolato; elytris parum punctatis, stria suturali aliaque discoidali elongata; abdomine segmento basali post elytrorum suturam vix perspicue foveolato. Long. 2 mm.

While the next species approaches in appearance (and in the structure of the head) somewhat to *Tychus*, *T. simplex* has quite the appearance of a *Bryaxis*, and is abundantly distinguished by the absence of punctuation on the head and thorax. The antennæ are moderately stout, with large 2-jointed club. At the base of the 1st dorsal segment behind the suture of the elytra there is only an obscure depression, and no raised lines.

The male has the terminal joint of the antennæ longer than the female, and the middle trochanters armed with a short truncate prominence; the metasternum simple.

A small series of this species was met with at Niigata on the 15th Sept., 1881.

Bryaxis protervus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 121.

A few specimens of this species were found about Nagasaki in the early spring of 1881; February to April.

BYTHINUS.

Bythinus affinis, n. s.

Fulvus, evidententer pubescens, capite thoraceque dense punctatis, opacis, elytris parce, fortiter punctatis; palpis maxillaribus articulo ultimo elongato, fere gracili. Long. $1\frac{1}{4}$ mm.

Mas, antennis articulo basali incrassato, secundo parvo simplice, pedibus posterioribus fortiter incrassatis.

Extremely similar to *B. japonicus*, but with different male characters, and the thorax more coarsely punctate. In the male the basal joint of the antennæ is enlarged, so that it is broader and longer than it is in the same sex of *B. japonicus*, whereas the 2nd joint remains simple, being thus more slender than the 1st, instead of dilated, globose, and broader than the 1st, as is the case in *B. japonicus*; the hind legs are much more incrassate than in any individual I have seen of *B. japonicus*. The antennæ much resemble those of the female of *B. japonicus*, but the basal joint is larger and thicker, and the incrassate hind legs readily distinguish the male *B. affinis* from the female *B. japonicus*. The females of the two species are probably excessively similar.

A single male individual was found at Nagasaki, 6th April, 1881.

Bythinus japonicus, Sharp.

Sharp, Trans. Ent. Soc. Lond., 1874, p. 125.

A small series of about a dozen individuals was found about Nagasaki in March and April; and a single specimen at Miyanoshita. As is frequently the case with the European species of *Bythinus*, most of the individuals are females. The incrassation of the male hind legs is not very considerable in any of the few males found by Mr. Lewis.

Bythinus subscriatus, Weise.

Weise, Deutsche Ent. Zeit., 1877, p. 98.

Oshiroyama, Hagi (*Hiller*).

This species has not been found by Mr. Lewis.

Bythinus reversus, n. s.

Major, testaceus, longius pubescens; vertice prothoraceque crebre sat fortiter, elytris parcissime obsolete, punctatis; palpis maxillaribus articulo ultimo, elongato, fere gracili. Long. vix 2 mm.

Although only two female individuals in an immature condition have been found, this species appears to be a very distinct one. It has the maxillary palpi formed nearly as in *B. curtisi*, from which species it is very different by its much larger size and different punctuation. The antennæ have an elongate basal joint, about

as long as the three following together, the 2nd slightly more slender than the 1st, and not quite half its length; 3rd more slender and a little shorter than 2nd; 4th to 8th similar to one another, each about as long as broad; 9th slightly larger, also about as long as broad; 10th broader, transverse; terminal joint elongate and much pointed. Head with rather large eyes, and with a rather closely punctate vertex. Thorax not quite so long as broad, much narrowed behind, its surface with rather deep and distinct, but not close, punctures. Elytra only sparingly and indistinctly punctate. The larger size, more elongate basal joint to the antennæ, and obsolete punctuation of the elytra make the species easily distinguished from such others as have yet been found in Japan.

Nagasaki, June 1st, 1881.

PSELAPHUS.

Pselaphus debilis, n. s.

Depressus, latiusculus, subopacus, piceo-rufus, antennis pedibusque rufis, palpis testaceis, articulo ultimo apice breviter clavato; elytris quasi carinatis, seriebus duabus setarum. Long. $1\frac{1}{2}$ mm.

Very similar in size and form to *Pselaphus revelieri*, though very different structurally, the margin of the hind body being flat and not elevated, and the elongate basal segment only about half as long as in *P. revelieri*; the maxillary palpi are excessively elongate and slender, with a small but rather abrupt club at the extremity. Head opaque, being densely and finely coriaceous. Thorax also opaque, small, rather broad (for this genus), though scarcely so broad as long, very evidently foveate in front of the base. Elytra narrow at the shoulders, greatly broader behind, not shining, but not so dull as the front parts; the suture slightly carinate, and each with two longitudinal ridges of very minute setæ, the outer margin with an obscure series of setæ. Hind body with a few distant setæ.

Mr. Lewis has found a pair of this species near Suwa Temple, the male on the 11th, the female on the 13th, April, 1881; the male is rather smaller and paler than the female, and has the apex of the metasternum

obscurely impressed, and the larger of the ventral segments with two very fine short ridges, causing it to appear foveolate on the middle between them.

Pselaphus lewisii, n. s.

Angustulus, rufo-testaceus, nitidus, palpis testaceis, articulo ultimo longius clavato, parcissime setulosus; elytris stria suturali aliaque discoidali obsoletis. Long. $1\frac{3}{4}$ mm.

This species is not very dissimilar from the well-known European *P. heisei*, except that it is very much narrower, and is entirely destitute of the two peculiar pseud-ocelli seen between the eyes of *P. heisei*; the antennæ and palpi are similar to those of *P. heisei*, the club of the last joint of the latter being more than half the length of the joint. The thorax is very shining, and without fovea. The elytra and hind body are very similar to those of *P. heisei*, except that the sutural and discoidal striæ are less distinct.

A single example, probably a female, was found at Nagasaki on the 28th May, 1881.

DIARTIGER, n. g.

In this genus of *Clavigerini* the insect possesses eyes, and has the antennæ 4-jointed; the 1st joint is very short, globose, and is only imperfectly separated from the very short 2nd joint, which is a little narrower and a little shorter than the globose basal joint, and projects just a little out of the cavity of the head; the 3rd joint is slender and elongate, evidently thicker, however, towards the extremity, and is quite three times as long as the breadth at the extremity; it is deeply divided from the 4th joint, which is rather elongate, becomes gradually broader towards the extremity, which is abruptly truncate; it is longer than the 3rd joint. This is a similar disposition of the antennæ to what would exist in *Fustiger fuchsii*, if the terminal joint of that insect were deeply divided into two near its middle.

From *Clavigerodes*, Raff., which is stated by Reitter to possess 4-jointed antennæ, *Diartiger* is distinguished by the fact that it has only two exerted antennal joints; from an inspection of a specimen of *Clavigerodes abyssinicus* I entertain, however, little doubt that, if we

adopt Mr. Reitter's view that the antennæ are 3-jointed in *Fustiger*, we must consider them to be 5-jointed in *Clavigerodes*.

The description above given of the antenna of *Diartiger* may be relied on, as it has been made from an antenna disarticulated by cutting off the corner of the head with an antenna attached, and then cutting away the portions of the head till the base of the antenna is cleared and left intact. By the same mode of treatment *Claviger* displays apparently a 6-jointed antenna, the 2nd joint being, however, as in *Diartiger*, separated not by a true articulation, but only by a constriction from the 2nd joint, and it would perhaps be more accurate to treat these two minute basal portions as being really only one articulation.

Diartiger fossulatus, n. s.

Rufescens, tenuiter flavo-setosus, elytrorum apice abdominisque latere ad basin dense flavo-pubescentibus; capite, thorace elytrisque dense subtiliter punctatis, haud nitidis, abdomine nitido, basi in medio fovea maxima impressa. Long. 2 mm.

Mas, pedibus intermediis trochanteribus longe, femoribus breviter, spinosis, tibiis lateraliter compressis, intus ad medium dente minimo instructis.

Very similar to *Claviger foveolatus*, but smaller and more slender, with the head, thorax, and elytra more densely punctate, the latter longer. The head is as long as, but much narrower than, the thorax; the latter is smaller, rather longer than broad, deeply foveate at the base; the elytra are much longer than the thorax, very finely punctulate, with a rather close, very fine, depressed pubescence.

This insect was found in company with a species of *Formica*? at Hakone and Miyanoshita in May, 1880; Shimabara and Fukuhori, near Nagasaki, are also localities for it. A few specimens were found at Futai on the 20th Sept., 1881, in company with the same species of ant; and a single individual of a rather more elongate form and darker colour was found at Hitoyoshi in the month of May.

Diartiger spinipes, n. s.

Rufescens, tenuiter flavo-setosus, elytrorum apice abdominisque latere ad basin dense flavo-pubescentibus; capite thoraceque dense, elytris parce subtiliter, punctatis; abdomine nitido, longius setoso, basi in medio fovea maxima impressa. Long. $2\frac{1}{4}$ mm.

Mas, pedibus intermediis, trochanteribus spina perelongata, femoribus spina elongata curvata, tibiis lateraliter compressis.

This species appears to be closely allied to *D. fossulatus*, but the individual before me is rather larger than the largest of that species, has the antennæ slightly more elongate, the elytra much more sparingly punctate, and the spines on the middle legs of the male of remarkable elongation. In *D. fossulatus* a well-marked patch of golden pubescence extends along the middle of the breast in each sex, but is more conspicuous in the male; in the male of *D. spinipes* this pubescence is absent, and the hinder part of the metasternum is broadly impressed.

A single individual was found at Yuyama, May 10th, 1881.